

## The Ophidioid Fish Genus *Luciobrotula* in the Hawaiian Islands<sup>1</sup>

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THE CIRCUMTROPICAL ophidioid fish genus *Luciobrotula* (which has *Volcanus* Gosline as a junior synonym) contains three described species, all of which are benthic slope-dwellers. They are: *lineata*, collected off the Mauna Loa, Hawaii 1950 lava flow; *corethromycter*, from the tropical Atlantic;<sup>3</sup> *bartschi*, presently recorded from the Gulf of Aden, the Philippines, and Japan. References to all three species have been given by Cohen (1964).

Exploratory trawling conducted by Dr. Paul Struhsaker of the U.S. National Marine Fisheries Service, Honolulu, has revealed the existence in the Hawaiian Islands of *L. bartschi*; thus, the known range of this already widely distributed species has been considerably extended and a second species of *Luciobrotula* has been added to the Hawaiian fish fauna.

Four specimens (three of which I have studied) were caught with a 41-ft bottom trawl

at R.V. *Townsend Cromwell* station 61-66 off north Maui (21° 04' N, 156° 09' W; 400-430 fm; 26 October 1972). The specimens are cataloged in the National Museum of Natural History, Washington, D.C. as USNM 209305.

The following data (measurements in mm) were taken in order to identify the specimens with the key and table given by Cohen (1964): standard length 413, 236, 122; length of longest gill raker 7.6, 4.6, 2.8; vertical diameter of orbit 8.8, 4.5, 2.3; horizontal diameter of orbit 11.3, 8.1, 4.1; head length 101, 56.6, 29.6; ventral fin length 45.5, 28.0, 16.2; pre-ventral length?, 41.4, 20.7; dorsal fin rays 88, 91, 91; anal fin rays 72, 70, 72; pectoral fin rays 28, 28, 28; vertebrae 54, 53, 53.

The above data invalidate several of the key characters used by Cohen (1964); hence a revised key to the genus is presented.

### KEY TO THE GENUS *Luciobrotula*

- 1a. Tubular lateral line terminating at about level of origin of dorsal fin; ventral fin length 1.5 times in head length ..... *lineata* (Gosline)
- 1b. Tubular lateral line terminating at about level of origin of anal fin; ventral fin length 1.8 to 3.5 times in head length.
- 2a. Dorsal fin rays 86 to 91; ventral fin length 1.8 to 2.2 times in head length; pre-ventral distance<sup>4</sup> 16.4 to 17.5 percent of standard length ..... *bartschi* Smith & Radcliffe
- 2b. Dorsal fin rays 93-103; ventral fin length 2.3 to 3.5 times in head length; pre-ventral distance 18.5 to 21.7 percent of standard length ..... *corethromycter* Cohen

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<sup>3</sup> Although *L. corethromycter* has been recorded in the literature from the western Atlantic only, the Nielsen

and Nybelin (1963) record of *L. bartschi* from West Africa is referable to *corethromycter*.

<sup>4</sup> Nielsen (personal communication) suggests that pre-ventral distance as percent of standard length may vary with absolute size of the specimen; hence, the measurement should be used with care as a key character.

## LITERATURE CITED

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